

Serial No.: 09/700,617
Conf. No.: 8085

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Art Unit: 2637

In the Drawings

A "Replacement Sheet" is attached which includes a clean version of amended Figure 1.
The attached sheet replaces the original sheet including Figure 1.

REMARKS

This Amendment responds to the Office Action mailed January 4, 2005 in the above-identified application. Based on the foregoing amendments and the following comments, reconsideration and allowance of the application are respectfully requested.

Claims 1-49 were previously pending in the application. By this Amendment, claims 1, 6, 9, 10, 12-14, 16-20, 22-24, 28, 31, 32, 34-36, 38-43 and 46 are amended. Claims 3-5, 25-27, 44-45, and 47-49 are canceled without prejudice or disclaimer. Accordingly, claims 1, 2, 6-24, 28-43 and 46 are pending in the application, with claims 1, 23, 43 and 46 being independent claims. No new matter has been added.

The Examiner has objected to the drawings under 37 C.F.R. §1.83(a), because the drawings must show every feature of the invention specified in the claims. Enclosed herewith is a proposed amendment to Fig. 1. The sampling clock recited in the claims is shown in amended Fig. 1. Claim 1 has been amended to specify that the equalization parameter updating means includes ambiguity prevention means. Accordingly, the ambiguity prevention means is included within the equalization parameter updating algorithm block shown in Fig. 1. The objection with respect to claim 3 has been obviated by the cancellation of claim 3. Accordingly, approval of amended Fig. 1 and withdrawal of the objection are respectfully requested.

The Examiner has objected to the drawings because arrow connections between blocks are alleged to be unclear. However, Fig. 1 shows that the equalizer output U is supplied to the detector, the equalization parameter updating algorithm and the sampling clock control algorithm. Fig. 1 also shows that the detector output Y is supplied to the symbol decoder, the sampling clock control algorithm and the equalization parameter updating algorithm. Applicants believe that the connections between elements are shown clearly in Fig. 1 and that no further amendment is necessary. Accordingly, withdrawal of the objection is respectfully requested.

The Examiner has objected to the form of the abstract and to the lack of section headings in the specification. The abstract has been amended. In addition, the specification has been amended to add section headings. Accordingly, withdrawal of the objection to the specification is respectfully requested.

The Examiner has objected to various informalities in the claims. The suggested changes have been made, except with respect to claims 2-20 and 24-42. The Examiner suggested

changing “A” to “The” in line 1 of claims 2-20 and 24-42. Applicants know of no basis for suggesting this change. Accordingly, withdrawal of the objection is respectfully requested.

The Examiner has rejected claims 43-45 under 35 U.S.C. §112, first paragraph, as failing to comply with the enablement requirement. The Examiner asserts that page 2, lines 8-9 of the specification teaches that the sampling clock control means includes ambiguity prevention means. It is respectfully submitted that the cited section of the specification, which paraphrases original claim 1, has been misread. In fact, the ambiguity prevention means is intended as a characteristic of the receiver rather than the sampling clock control means. This is apparent from a reading of page 1, line 14 to page 2, line 1 of the specification. Amended claim 1 specifies that the equalization parameter updating means includes ambiguity prevention means. Accordingly, withdrawal of the rejection under 35 U.S.C. §112, first paragraph, is respectfully requested.

The Examiner has rejected claims 1-42 and 44-48 under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Examiner has identified various claim language which is alleged to be unclear. In response, the claims have been amended for clarification.

In claim 1, line 4, “time differences” has been amended to “time differences between the receiver and the transmitter”.

Claim 2 has been amended to specify that the adaptive channel equalizer means provides an equalized data stream.

Regarding claim 4, which has been incorporated into amended claim 1, “an equalizer parameter argument function” is now defined.

Regarding claim 5, which has been incorporated into amended claim 1, the sampling clock frequency, the equalizer output vector U and the quantized vector Y are now defined.

Regarding claim 8, it is respectfully submitted that EQ in the equation is defined as an unwrapped equalizer parameter argument function.

Claim 9 has been amended to provide an antecedent basis for “the received signal”.

Claims 12-14 have been amended to recite the equalizer parameter now defined in amended claim 1.

Claim 16 has been amended to recite the equalizer parameter now defined in amended claim 1.

Claim 23 has been amended to recite method steps.

Claim 25, which has been incorporated into amended claim 23, has been amended to recite “said receiver sampling clock”.

Claim 44, which has been incorporated into amended claim 43, has been amended to define the equalizer parameter argument function.

Claim 46 has been amended to specify that the method is implemented in the receiver.

Claim 47, which has been incorporated into amended claim 46, has been amended to define the equalizer parameter argument function.

Amendments similar to those described above have been made in the other claims that use similar language.

The amended claims are in full compliance with 35 U.S.C. §112, second paragraph, and withdrawal of the rejection is respectfully requested.

The Examiner has rejected claims 1-22 under 35 U.S.C. §112, second paragraph, as being incomplete for omitting essential elements, such omission amounting to a gap between elements. Claim 1 has been amended for clarification and to recite all essential elements. Accordingly, withdrawal of the rejection under 35 U.S.C. §112, second paragraph, is respectfully requested.

Claims 1-4, 17-26, 39-44, 46-47 and 49 have been rejected under 35 U.S.C. §102(e) as anticipated by Olsson et al. (US 6,625,112). Claims 5-16, 27-38 and 48 are indicated to be allowable if rewritten to overcome the rejections under 35 U.S.C. §112, second paragraph, and to include all the limitations of the base claim and any intervening claims.

Applicants do not concur in the rejection under 35 U.S.C. §102(e) and expressly reserve the right to file the rejected claims in a continuation application. Accordingly, the claim amendments and cancellations herein should not be construed as a surrender of the claimed subject matter. However, in order to advance prosecution of the application, the limitations of allowable claim 5 have been incorporated into amended claim 1. Similarly, the limitations of allowable claim 27 have been incorporated into amended claim 23, and the limitations of allowable claim 48 have been incorporated into amended claim 46. Accordingly, amended claims 1, 23 and 46, and the claims that depend from claims 1 and 23, are in condition for allowance.

Claim 45 contained limitations similar to the limitations of allowable claim 48 and is believed to be allowable for at least the same reasons. Claim 45 has been incorporated into amended claim 43. Accordingly, amended claim 43 is in condition for allowance.

Based upon the above discussion, amended claims 1, 2, 6-24, 28-43 and 46 are in condition for allowance.

CONCLUSION

A Notice of Allowance is respectfully requested. The Examiner is requested to call the undersigned at the telephone number listed below if this communication does not place the case in condition for allowance.

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicant hereby requests any necessary extension of time. If there is a fee occasioned by this response, including an extension fee, that is not covered by an enclosed check, please charge any deficiency to Deposit Account No. 23/2825.

Respectfully submitted,
Johansson et al., Applicant(s)

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